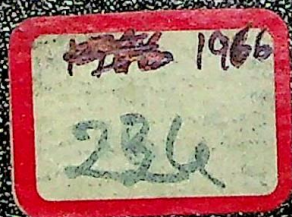


THIRD SCIENTIFIC  
CONFERENCE G.K.V.





गुरुकुल कांगड़ी विश्वविद्यालय  
कृपया पुस्तक के ऊपर कोई निशान आदि  
न लगायें।

## पुस्तकालय

गुरुकुल कांगड़ी विश्वविद्यालय, हरिद्वार

वर्ग संख्या .....

आगत संख्या.....

पुस्तक विवरण की तिथि नीचे अंकित है। इस तिथि सहित ३० वें दिन यह पुस्तक पुस्तकालय में वापस आ जानी चाहिए। अन्यथा ५० पैसे प्रति दिन के हिसाब से विलम्ब दण्ड लगेगा।

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# THIRD SCIENTIFIC CONFERENCE

## Post Graduate Institute of Indian Medicine

Faculty of Medical Sciences



*Aug. 27th, 28th and 29th, 1966*

BANARAS HINDU UNIVERSITY

VARANASI-5 (India)



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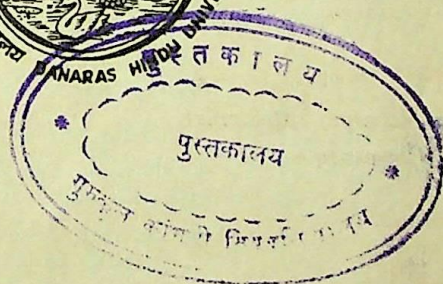
# THIRD SCIENTIFIC CONFERENCE

## Post Graduate Institute of Indian Medicine

Faculty of Medical Sciences

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वैद्य धर्मदत्त  
समृति संग्रह



*Aug. 27th, 28th and 29th, 1966*

BANARAS HINDU UNIVERSITY

VARANASI-5 (India)



तद्विद्य संभाषा हि ज्ञानाभियोग संहर्षकरी भवति, वैशारद्य मपि चाभि  
निर्वर्तयति, वचन शक्ति मपि चाघत्ते, यशश्चाभिदीपयति, पूर्वं श्रुते च स  
देहवतः पुनः श्रवणाच्छ्रुतसंशयमपकर्षति, श्रुते चा सं देह वतो भूयो ध्यवसाय-  
मभिवर्तयति, अश्रुतमपि च कञ्चिदर्थं श्रोत्र विषय मापादयति,

च० वि० ८१५

Discussion with a person of the same branch of science is indeed what makes for the increase of knowledge and happiness. It contributes towards the clarity of understanding, increases dialectical skill, broadcasts reputation, dispels doubts regarding things heard by repeated hearing, and confirms the ideas of those that have no doubts. It enables one to hear a few new things in the course of discussion.

(Quoted from Charak Samhita—Page—872)

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# THIRD SCIENTIFIC CONFERENCE

UNDER THE AUSPICES OF

## Post Graduate Institute of Indian Medicine,

FACULTY OF MEDICAL SCIENCES,  
BANARAS HINDU UNIVERSITY

### FIRST SCIENTIFIC SESSION

*Saturday, August, 27, 1966 : 4-30 P.M. to 6-30 P.M.*

*Chairman*

DR. SUSHILA NAYAR

*Rapporteur*

DR. K. N. UDUPA

*Place :*

COLLEGE OF MEDICAL SCIENCES LECTURE THEATRE

1. OBESITY AND ITS HAZARDS: AN APPROACH TO  
ITS MANAGEMENT WITH AN INDIGENOUS DRUG

DR. S. N. TRIPATHI

DR. G. V. SATYAVATI

2. ROLE OF CERTAIN AYURVEDIC DRUGS ON THE  
FUNCTION OF URINARY BLADDER IN PROSTATIC  
ENLARGEMENT AND ON URINARY CALCULUS

DR. P. J. DESHPANDE

DR. R. P. SINGH

DR. P. SHANKER NAIR

3. AN EXPERIMENTAL AND CLINICAL STUDY ON  
ANTICOAGULANT ACTION OF CERTAIN INDI-  
GENOUS DRUGS WITH SPECIAL REFERENCE  
TO ARJUNA (TERMINALIA ARJUNA)

DR. G. N. CHATURVEDI

DR. P. N. CHATURVEDI

SRI S. P. SEN



4. ESTIMATION OF TOTAL BLOOD VOLUME IN  
DIFFERENT HUMAN GROUPS

DR. G. P. DUBEY  
DR. H. C. SHUKLA

5. CHEMICAL STUDY OF INDIGENOUS DRUGS  
HAVING CHOLINERGIC ACTIVITY

SRI S. P. SEN  
DR. B. DAS GUPTA  
DR. A. K. SANYAL  
DR. S. S. GAMBHIR  
DR. P. K. DAS

6. SURGICAL CONVALESCENCE IN RELATION TO  
DOSHIK PRAKRITI

DR. P. J. DESHPANDE  
DR. L. M. SINGH  
DR. J. D. GODE  
DR. P. S. SHANKARAN

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## SECOND SCIENTIFIC SESSION

*Sunday, August, 28, 1966 : 9 A.M. to 11 A.M.*

*Chairman*

DR. C. DWARAKANATH

*Rapporteur*

DR. P. V. SHARMA

*Place :*

COLLEGE OF MEDICAL SCIENCES LECTURE THEATRE

1. OIL OF SEMECARPUS ANACARDIUM (BHALLATAKA).  
IN THE TREATMENT OF LEPROSY

DR. D. OJHA

2. ANTHROPOMETRIC APPROACH TO DOSHA  
PRAKRITI OF TWENTY THREE SUBJECT  
WITH ABNORMAL GASTRIC ACIDITY  
AND DUODENAL ULCER

DR. H. C. SHUKLA

DR. G. P. DUBEY

3. AN EXPERIMENTAL STUDY ON CHANGES IN  
COAGULATION ASSOCIATED WITH HYPERLIPEMIA  
AND ITS MANAGEMENT WITH AN INDI-  
GENOUS DRUG

DR. S. N. TRIPATHI

DR. V. V. S. SHASTRI

4. STUDIES ON THE ANTI INFLAMMATORY AND  
ANTI ARTHRITIC ACTIVITY OF AN INDIGENOUS  
DRUG PAEDERIA FOETIDA

DR. R. H. SINGH

5. TREATMENT OF FISTULA IN ANO BY KSAR SUTRA  
A REVIEW OF 100 CASES

DR. L. M. SINGH

DR. S. N. PATHAK

DR. B. N. SHARMA

DR. P. J. DESHPANDE



6. PRELIMINARY STUDIES ON UTERINE ACTIVITY  
OF GLORIOSA SUPERBA LINN. AND ITS ADUL-  
TERANT COSTIS SPECIOSUS S.M.

DR. (KM.) P. TIWARI

DR. D. N. PRASAD

DR. C. CHATURVEDI

DR. P. K. DAS

COFFEE BREAK



### THIRD SCIENTIFIC SESSION

*Sunday, August 28, 1966 : 11.30 A.M. to 1.30 P.M.*

*Chairman*

DR. P. M. MEHTA

*Rapporteur*

DR. P. K. DAS

*Place :*

COLLEGE OF MEDICAL SCIENCES LECTURE THEATRE

1. INDUCTION OF RENAL LITHIASIS IN EXPERIMENTAL ANIMALS AND ITS TREATMENT WITH INDIGENOUS DRUGS

DR. S. K. MISHRA

2. STUDIES ON A CARDIOTONIC PRINCIPLE FROM MAMMALIAN HEART IN RELATION TO PARA-OJAS

DR. L. P. GUPTA

SRI S. P. SEN

DR. D. S. GOUR

3. CHEMICALLY INDUCED COUGH REFLEX AND TRIAL OF 'KANTAKARI AVALEHA' FOR ANTI-TUSSIVE ACTIVITY

DR. R. S. SINGH

DR. R. K. GUPTA

DR. J. K. OJHA

DR. H. S. BAJPAI

DR. J. P. GUPTA

4. CERTAIN PHARMACOLOGICAL STUDIES ON 'ECLIPTA ALBA' (BHRINGA RAJ) WITH REFERENCE TO ITS HYPOTENSIVE PROPERTY

SRI S. P. SEN

DR. P. S. CHAURE

DR. G. N. CHATURVEDI



5. ROLE OF SHELLAC IN THE HEALING OF  
FRACTURE

DR. P. J. DESHPANDE  
DR. J. D. GODE

6. STATUS OF MILITARY MEDICINE IN ANCIENT  
INDIA

DR. JYOTIR MITRA  
DR. SATYA PAL GUPTA

LUNCH BREAK



## FOURTH SCIENTIFIC SESSION

*Sunday, August, 28 1966 : 3 P. M. to 5 P.M.*

*Chairman*

DR. VENKAT RAGHAVAN

*Rapporteur*

DR. Y. N. UPADHYAYA

*Place :*

COLLEGE OF MEDICAL SCIENCES LECTURE THEATRE

1. CLINICAL TRIAL OF JATAMANSI IN CASES OF  
SCHIZOPHRENIA

DR. K. P. SHUKLA

2. A STUDY OF PSYCHIC PERSONALITY IN  
AYURVEDA

DR. S. P. GUPTA

DR. JYOTIR MITRA

SRI E. G. PHADIA

3. PHARMACOGNOSTICAL STUDIES ON CLERODEN-  
DRUM PHLOMIDIS LINN. (LAGHU AGINMANTH)

DR. K. C. CHUNekar

DR. K. RAGHUNATHAN

4. FURTHER STUDIES ON ANTI ARTHRITIC PRO-  
PERTY OF DALBERGIA LANCEOLATA (GAURAKH)

DR. S. N. TRIPATHI

DR. P. KISHORE

DR. D. N. PRASAD

5. EXPERIMENTAL VALIDATION OF DOVARIAGI-  
LITY AMONG CERTAIN PSYCHOLOGICAL  
VARIABLES AS OBSERVED IN AYURVEDIC  
THEORY OF PERSONALITY

DR. D. S. GAUR

SHREE M. D. SHARMA



## OBESITY AND ITS HAZARDS: AN APPROACH TO ITS MANAGEMENT WITH AN INDIGENOUS DRUG

Dr. S. N. TRIPATHI & Dr. G. V. SATAYAVATI

Obesity with its known deleterious effects on health, has become a serious health problem in modern civilized life. Obesity has been known to be associated with a number of hazards and complications that tend to shorten the life-span of the individual. *Atherosclerosis* is one of the most important and sinister of these complications, reputed as the 'greatest killer' of man kind to-day.

In spite of extensive investigations, obesity is still mainly considered as a problem of nutrition, a result of caloric imbalance in the body, leading to enormous increase in the adipose tissue. The role of an inherent derangement of metabolism, particularly of fats and carbohydrates, in the etiopathogenesis of obesity is yet to be clarified.

With the background, the main approach to the management of the problem of obesity has been through the medium of *diet-regulation* i.e. a correction of the caloric imbalance by restricting the intake. Considering the psychological background of the obese individuals as a rule, management on this line is beset with many difficulties and is not always successful. The many drugs used as supplements to the diet-regulation schedule also are known to act either through the *axis* of the appetite or as non-nutritive carbohydrate substitute etc. The *hormones*, used in the hope of correcting the metabolic error, have so far proved ineffective and in some cases even dangerous.

The Ayurvedic system of medicine also has laid down a more or less similar line of management for obesity. However,



certain drugs have also been enlisted by the ancient authorities as being highly beneficial in reducing the bulk of the body. Among them, the drug, *Guggulu* (*Commiphora mukul*), an oleo-gum-resin enjoys a unique place by virtue of its versatility. This drug is reputed not only for reducing the body-weight but also to be effective in the treatment of its complications—particularly conditions analogous to *Atherosclerosis*. This drug was therefore selected for trial.

25 cases of obesity were selected from the outdoor and the drug was administered in the form of capsules (6 G. per day in 3 divided doses). No diet-restriction was imposed. A reduction in the body-wt. was noticed in all the cases within 15 days. (average = 8 lbs./month). Symptomatic improvement was reported in almost all the cases. No untoward side effects were noticed except diarrhoea in 4 cases. In addition, the drug also showed a hypocholesterolemic effect confirmed by experimental studies on rabbits. Studies on experimental atherosclerosis as well as coagulation phenomena have shown encouraging results. While the mode of action in reducing the body weight is yet to be worked out, it can be suggested that the *drug* seems to act on the axis of lipid metabolism since a preliminary phytochemical analysis has shown that the drug possesses anion exchange *power* with bile acid sequestering property.

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## ROLE OF CERTAIN AYURVEDIC DRUGS ON THE FUNCTION OF URINARY BLADDER IN PROSTATIC ENLARGEMENT & ON URINARY CALCULUS

Dr. P. J. DESHPANDE, Dr. R. P. SINGH &  
DR. P. SHANKAR NAIR

Varun has been quoted in Ayurvedic literature extensively for its effective role in the treatment of various urinary disorders, specially of a nature of obstructions and in conditions involving urinary stone formation. An effort was made to assess the specification of the action by giving the decoction of Varuna during the preoperative period to the cases of enlarged prostate admitted in Shalya ward.

A careful preoperative investigation and confirmation of diagnosis was done before the drug was started and bladder behaviour in terms of pressure for sensation of micturition and acute desire for micturition was measured. After giving the drugs for 8 to 10 days the same cystometric pressure studies were undertaken and compared.

Cases were operated and post-operative cystometry was done for assessing the functional improvement. The results are compared with preoperative and postoperative cystometric assessment done in cases kept as controls which did not receive Varuna decoction.

To assess its role on Ashmary urinary stones were produced experimentally in white rats by introducing a glass beads of known weight in the bladder. Groups of rats were sacrificed at 5, 10, 15, 20, 25 days. Treated groups received Varuna decoction adlib in place of water. The rats were sacrificed and the weight



of the stones were noted. It was seen from the above study that Varuna kwath during the preoperative period improves the functional tone of the bladder musculature which has a direct contribution as far as the postoperative regaining of bladder control is concerned in experimental animals, decoction of Varuna adlib to the rats showed remarkable effect in terms of the total weight of the stone formed over a period of 5, 10, 15, 20, 25 days. By 25th day in control the weight of the stone was upto 800 mg. where as it could only reach the 200 mg. in treated series.

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## AN EXPERIMENTAL AND CLINICAL STUDY ON ANTICOAGULANT ACTION OF CERTAIN INDIGENOUS DRUGS WITH SPECIAL REFERENCE TO 'ARJUNA' (TERMINALIA ARJUNA)

G. N. CHATURVEDI, P. N. CHATURVEDI &  
S. P. SEN

The Ayurvedic physicians have been using successfully 'Arjuna' (*Terminalia Arjuna*) in the heart disease since long. But scientific reports of previous workers on this drug are not very encouraging. These reports mainly relate to pharmacological works and clinical trials in congestive cardiac failure. Keeping in view the results of previous workers it was thought desirable to see the effect of Arjuna on ischaemic heart diseases as previous workers could not obtain satisfactory results in cases of congestive cardiac failure. So far no work has been done on this aspect by any worker.

Initially two indigenous drugs Arjuna (*Terminalia Arjuna*) and Lahsuna (*Allium Sativum*) were taken for experimental screening study. These drugs were given orally by rubber catheter in normal rabbits. The Arjuna powder was given in doses of 5 to 10 gm./kg. and Lahasuna expressed juice in doses of 5 to 10 cc. representing 6 to 12 gm./kg. for 6 weeks. A group of animals was maintained as control.

The parameters employed in this investigation were :—

- (1) Prothrombin Time (Quick's Method).
- (2) Platelet Count (Fonio's Indirect Method).and
- (3) Total Serum Cholesterol (Bloor's Method).

On the one hand the Arjuna group of rabbits showed a significant increase in the prothrombin time and decrease in



platlet count (anticoagulant action), on the other hand lowering of serum cholesterol (hypocholesteræmic action) was found in the 'Lahasuna' group of animals.

The effect of different extractives of Arjuna has been studied further. A significant prothrombin time increase has been obtained in water insoluble alcoholic extract and petroleum ether soluble extractives in doses of 18 gms./kg. The further phitochemical studies on Arjuna is in progress. Some general pharmacological studies have been also done. The drug does not seem to be toxic. The effect of different extractives of Arjuna is being studied on the experimental myocardial infarction in animals.

On the basis of these experimental studies the Arjuna was given to the patients of cerebral thrombosis (hemiplegia) in doses of 18 gms. per day in divided doses for 4 weeks. The clinical study has confirmed the experimental findings.

It seems that the Arjuna may possibly have an anticoagulant action in cases of Ischaemic Heart Disease (Coronary Thrombosis). The study on this line is still in preliminary stage.

However, on the basis of above experimental and clinical studies it seems probable that Arjuna may be used successfully in certain type of heart diseases. This may restore the traditional reputation of Arjuna (*Terminalia Arjuna*) described in the Ayurvedic literature.



## ESTIMATION OF TOTAL BLOOD VOLUME IN DIFFERENT HUMAN GROUPS'

Dr. G. P. DUBEY & Dr. H. C. SHUKLA

Many new parameters have been recently introduced to classify human types. But no attempt has been made to classify human beings on the basis of chemical composition of the body. The present work is a part of the long term project on the study of chemical composition of body in different human groups as described in Ayurveda. The attempt is also being made to develop new parameters to classify the human beings on the basis of chemical composition of the body.

The present study is based on twenty five apparently normal human subjects belonging to different groups. The total blood volume of the above subjects were done by using low dose of  $^{131}\text{I}$  human serum Albumin. The body surface area and weight per Sq. meter of body surface area was calculated in all the cases by using Du Bois formula. The means and standard deviation were calculated to see the difference in each group.

From the above study it was observed that maximum blood volume per Kg. body weight was found in Paittic group while minimum in Kaphaj and medium in Vatic group. The difference in the means of each group was found significant. The proportion of plasma volume to R.B.C. Volume was found highest in Vatic, less in Kaphaj and medium in Paittic group. Proportionately red cell volume was found highest in Kaphaj, lowest in Vataj and medium in Paittic group. A negative correlation of total blood volume per Kg. of body weight was found both with subcutaneous fat and weight per unit of body surface area.



## CHEMICAL STUDY OF INDIGENOUS DRUGS HAVING CHOLINERGIC ACTIVITY

S. P. SEN, B. DAS GUPTA, A. K. SANYAL,  
S. S. GAMBHIR & P. K. DAS

A review of the literatures on the pharmacodynamic studies of indigenous drugs will show that a large number of drugs have been reported to have cholinergic properties. In most cases, the studies had been undertaken with the water soluble fractions of alcoholic extractives of the drugs. Preliminary pharmacological studies of a few drugs, undertaken by the Department of Pharmacology, College of Medical Sciences, also showed similar effect. A systematic study on the phytochemistry and pharmacology of these drugs was therefore undertaken to find out the principle or principles responsible for this cholinergic property.

The studies reveal that the drugs contain quaternary bases, which are choline derivatives, and the cholinergic property observed, can be ascribed to these principles.

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## SURGICAL COVALESCENCE IN RELATION TO DOSHA PRAKRITI

P. J. DESHPANDE, L. M. SINGH, J. D. GODE &  
P. S. SHANKARAN

52 cases of hernia admitted in Shalya Ward were first examined for the constitution, on the basis of a standard proforma and were divided into three groups Vattaj, Pittaj and Kaphaj. After the operation their response to various factors was assessed as well as the time when normal physiological conditions returned was calculated and noted.

In this series, out of 52 cases. 28 were kaphaj, 14 were paittic, 10 were vatic.

Sleishmic prakriti showed the maximum tolerance for pain since none of them required analgesia for more than 24 hours whereas in Paittic and Vatic Prakriti 14%, & 20% cases respectively required analgesia beyond 48 hours.

57% of Sleshmie group had sound sleep on the very first post operative day, whereas in paittic and vatic group the sleep was disturbed in 21% and 41% cases respectively. Post operative thirst was 18% in Sleshmie, 40% in Vatic, 64% in Paittic cases on the first post operative day. Complete anorexia was complained even after 4 days in 4% Kaphaj, 21% in Paittic and nil in vatic group. No definite variation in the character of temp. was found in three groups; however, 14% of the paittic cases continued to have mild temp. beyond three days.

Presence of post operative cough was seen 60% of sleshmie, 21% of paittic and 30% of vatic group. Post operative nausea was complained by 20% of vatic group, completely absent in paittic group and 4% in Kaphaj group. Abdominal, distension and discomfort in the first three post operative days was



complained in 90% of vatic prakriti 4% in paittic and 21% in kaphaj prakriti.

Restlessness was seen 40% in vatic 21% in paittic and 21% in Kaphaj group.

Almost all cases in all the three groups passed urine within first twenty four hours in vatic group. However, 14% case of paittic and 10% in sleshmic group passed their first urine. It was noteworthy 54% of sleshmic and 50% cases of paittic passed first urine within 12 hours, however, in vatic group 30% cases passed urine 24 hours.

In nearly 64% cases of sleshmic 50% of paittic 70% of vatic passed their flatus in first 24 hours. Out of these more than 30% case in vatic group passed flatus within first twelve hours.

70% cases of vatic group passed their stool in 1st seventy two hours 42% in paittic and 29% in Sleshmic group passed within 72 hours.

Almost all the cases could take the solid food by 4th day in vatic group whereas 80% in Pittaj and 96% cases in Kaphaj group took food in the 4th day.

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## OIL OF SEMECARPUS ANACARDIUM (BHALLATAK) IN THE TREATMENT OF LEPROSY

Dr. DIVAKAR OJHA.

A controlled clinical trial is reported of oil of Semecarpus Anacardium alone and combined with dapsone therapy compared with dapsone alone in the treatment of pure lepromatous leprosy. Twenty untreated and advanced cases were included and the final analysis was made on 18 cases, studied for one year.

Over the whole treatment period a statistically significant (at the 0.1 per cent level) deterioration in the clinical index (C. I.) and bacterial index (B. I.); but improvement in general health occurred in cases of oil of semecarpus anacardium. Contrary to this the cases on dapsone alone & combined treatment, improved clinically and bacteriologically. But improvement in general health occurred only in cases on combined treatment and not in cases on dapsone therapy alone. Therefore, it is evident that combined therapy resulted in a faster improvement than did dapsone alone. In addition to this the combined therapy maintained the general health condition from deterioration, generally caused due to use of dapsone. However, clinical and bacteriological assesment and improvement in general condition favoured combined therapy. Therefore, it is inferred that oil of semecarpus anacardium would be a useful adjunct to treatment of leprosy.

The other interesting observation that was noted, was besides the utility of the oil in treatment of leprosy or improvement in general health and vitality of tissues and being an anthelmintic, claimed by ancient Indian classics of Ayurveda.



## **"ANTHROPOMETRIC APPROACH TO DOSHA PRAKRITI OF TWENTY THREE SUBJECTS WITH ABNORMAL GASTRIC ACIDITY AND DUODENAL ULCER"**

**Dr. H. C. SHUKLA & Dr. G. P. DUBEY**

A short description of Ayurvedic and modern methods of approach to human constitution, with the theoretical basis of the authors present approach to doshanushaita dehaprakriti, has been given.

Scoring methods, on the basis of seven point code scales, developed for different measurements, has been described. After calculations of the % of doshic constitution associated with each of the three groups of subjects with hyperacidity, hypoacidity and duodenal ulcer, it was observed that score of pitta prakriti is highest in all the groups. Pitta prakriti percentage is found to be dominant also in the over all cases undertaken for this study and as far as this short study is concerned, the observation is in accordance with the physiopathological theory of Ayurveda.

# AN EXPERIMENTAL STUDY ON CHANGES IN COAGULATION ASSOCIATED WITH HYPERLIPEMIA AND ITS MANAGE- MENT WITH AN INDIGENOUS DRUG

Dr. S. N. TRIPATHI & Dr. V. V. S. SHASTRI  
INTRODUCTION

Hyperlipemia can occur both physiologically as in excessive ingestion of fats and pathologically in certain diseases like diabetes mellitus, myxedema, atherosclerosis, obesity etc. wherever the lipid metabolism is disturbed. Experimental evidence has shown that lipids are capable of speeding up the blood coagulative processes both in vitro and in vivo. Especially in a condition of hyperlipemia where the lipids are in the form of chylomicrons and giant molecules, they initiate the contact factors. If there is concomitant disease of vessel wall, thrombosis occurs in various parts of the vascular system particularly in heart and brain with a variety of consequences.

The persent drug Guggulu under observation was subjected to experimental studies in this department for its hypocholesterlemic action and proved to be quite dependable in that respect.

## METHODS AND MATERIALS

15 white rabbits weighing about 1 kg. each were selected. After estimating the initial readings of coagulation time, prothrombin time, serum cholesterol and serum turbidity levels, each rabbit was fed with 0.5 g. of cholesterol dissolved in 5 c.c. of hydrogenated vegetable oil by rubber tubing for ten days.

After grouping them into two for test and control according to the levels of serum cholesterol, the test group rabbits were



administered 2 gm. of crude guggulu dissolved in warm water by rubber tubing. Blood samples from all rabbits were collected at weekly intervals for various tests and the changes noted.

### OBSERVATIONS

At the end of the loading period increase in serum cholesterol and serum turbidity levels and decrease in coagulation time and prothrombin time were noted.

In the test group the following observations were noted :—

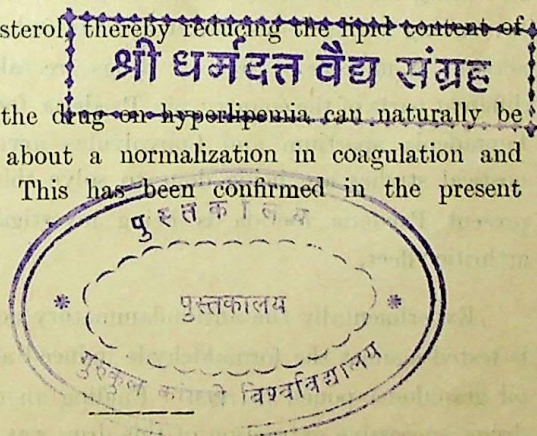
- (1) Changes in blood coagulation as indicated by lengthening of *coagulation time* and *prothrombin time*.
- (2) Decrease in the serum cholesterol and serum turbidity levels.

### DISCUSSION

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It has already been postulated by previous experimental work in this department, that the present durg, Guggulu, acts as a bile acids exchange resin facilitating the increased excretion of bile acids and preventing the absorption of fats from intestines. Increased excretion of bile acids causes increased catabolism of cholesterol, thereby reducing the lipid content of the blood.

This effect of the drug on hyperlipemia can naturally be expected to bring about a normalization in coagulation and prothrombin time. This has been confirmed in the present experiments.





# STUDIES ON THE ANTI-INFLAMMATORY AND ANTI-ARTHRITIC ACTIVITY OF AN INDIGENOUS DRUG, PAEDERIA FOETIDA

DR. R. H. SINGH

Rheumatoid arthritis is a fairly common disease in our country. Its obscure aetiology, the very crippling course and the present day ignorance about its actual specific treatment reflect the magnitude of this problem. The available scientific description of this disease in Ayurveda regarding its aetiology, pathogenesis and the therapeutic measures offer a promising field of work towards this problem. Recently some research on this line has been done. The present paper will concentrate on the antiarthritic (anti-inflammatory) activity of the indigenous drug *Prasarini* (*Paederia foetida*).

Prasarini as described in Ayurveda in a controversial drug. According to classical Ayurvedic description Prasarini is a climber having strong fibres, bitter in taste and mainly Vatahara in action. A number of different drugs are taken as Prasarini in different parts of the country viz *Paederia foetida*, *Cida humilis*, *Leptadenia spartium* and *Convolvulus arvensis*. Pharmacognostical studies are being done to solve this controversy. At present *Paederia foetida* is being investigated for its antiarthritic effect.

Experimentally the anti-inflammatory activity of this drug is tested against the formaldehyde induced arthritis and croton oil granuloma pouch in rats. Finding an effect in the crude drugs, successive extraction of this drug was done in petroleum ether, ether and alcohol. These extracts were tested for anti-inflammatory activity, and crude alcoholic extract showed a



significant effect. Some effect was also observed in petroleum ether extractive.

These extracts were further processed and a fat soluble principle was isolated from petroleum ether extract. This principle was again tested and did not show any significant anti-inflammatory activity. Simultaneously the alcoholic extract of the drug was also processed and a readily water soluble principle was isolated. This principle has shown anti-inflammatory activity in formaldehyde induced arthritis in rats.

This drug is being clinically tried in crude form in cases of arthritis. As the number of cases studied so far is small no conclusion can be drawn.

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## TREATMENT OF FISTULA IN ANO BY KSAR-SUTRA, A REVIEW OF 100 CASES

L. M. SINGH S. N. PATHAK, B. N. SHARMA, &  
P. J. DESHPANDE

Operative treatment of fistula is often far from simple and has an unenviable reputation of not infrequent recurrences and causing impairment of anal continence. It is only the rigorous aftertreatment involving painful and tedious dressings for prolonged periods in a hospital which afford a hope of permanent cure in these patients.

Fistula has been treated by ksar-sutra for the last 3 years in the department of Shalya of this institution. By this method fistula is treated on an outpatient basis. More than 100 cases have now been treated successfully. Except for some pain on first application of Ksar-stura, the patients had no other complaint and they could continue their normal routine all through the treatment. None of our patients needed hospitalization because of incapacitation. Except for a doubtful case there has been no recurrence in these hundred cases, neither there has been other well known complications of fistula operations. 8 of patients had undergone operative treatment earlier and were cases of recurrences. Fistula upto 15 cm. in length and of 10 years in duration were treated successfully.

Thus ksar-sutra offers a great advantage in the treatment of fistula. Further more average healing time was calculated by the initial length, the final length when the fistulous track was cut open and the duration of treatment. Correlation of this mean healing time with age, chronicity, Doshic prakriti has also been done and the validity of the ancient concepts have been examined.



PRELIMINARY STUDIES ON UTERINE  
ACTIVITY OF GLORIOSA SUPERBA  
LINN, AND ITS ADULTERANT  
COSTUS SPECIOSUS SM

DR. (KM) P. TEWARI, DR. D. N. PRASAD, DR. C. '  
CHATURVEDI & PROF. P. K. DAS

Preliminary studies have been conducted on the uterine activity of fresh juice obtained from *Gloriosa superba* Linn. and *costus speciosus* sm.

Both the drugs have been found to have many features in common ; both have a stimulant action on isolated uterine preparation of guineapig, rabbit and human beings ; both have stimulant action on rabbit and dog uterus *in situ* and both seem to have a direct action on uterine muscle as their effects are not blocked by ganglion blocking agents, parasympatholytic drugs and antihistaminics. There are however some marked differences on isolated rat's uterus. *Costus speciosus* has a spasmodic action whereas *Gloriosa superba* has papaverine like action. *Costus speciosus* has been found to possess 2.5 times more ecbohic activity than *Gloriosa superba*. The present investigations have revealed facts which are contrary to common conception. The real plant *Floriosa superba* although described in Ayurvedic text to be potent ecbohic agent has been found in-ferior in this respect to its adulterant *Costus speciosus*.

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## INDUCTION OF RENAL LITHIASIS IN EXPERIMENTAL ANIMALS AND ITS TREATMENT WITH INDIGENOUS DRUGS

DR. S. K. MISHRA & PROF. K. N. UDUPA

The paper is divided in two portions the first portion deals with the standardization of a new experimental model for the induction of renal lithiasis in dogs by an intravenous injection of uranium nitrate. There has been sufficient incidence of calculus in experimental animals.

The experimental evaluation of the preventive role of *Commelina Benghalensis* on the present model constitutes the second portion of the paper. The results have been encouraging so far.

An attempt has been made to incorporate a brief account of the historical aspects of renal lithiasis in general emphasising that of the experimental renal lithiasis.

The results have been discussed in relation to ancient as well as modern literature.

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## “STUDIES ON A CARDIOTONIC PRINCIPLE FROM MAMMALIAN HEART IN RELATION TO PARA-OJAS”

DR. L. P. GUPTA, MR. S. P. SEN & PROF. D. S. GAUR

The study has been aimed to isolate and to ascertain the nature and properties of PARA or PRADHANA Ojas alleged to be present in heart as mentioned in our ancient texts. First of all the study was conducted with heart muscle homogenate, that responded a cardiotonic property on frog's heart. Later on from the mammalian heart muscle an organic amorphous substance could be isolated and tested experimentally on both the frog's and dog's heart. The result showed that the isolated principle has got a definite cardiotonic activity in minimal dosage as confirmed on both the normo-dynamic and hypo-dynamic state of frog's heart. The principle did not indicate any significant change in pattern of respiration and blood pressure, when tested on dog—that concluded the action possibly limited to the heart and not any systematic effect. These findings strongly withhold the hypothesis of PARA and APARA Ojas, made by great commentator Chakrapani.

A chromatographic study of this water soluble principle indicated the presence of three components that gave a ninhydrin positive reaction.

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## CHEMICALLY INDUCED COUGH REFLEX AND TRIAL OF KANTKARI AVALEHA FOR ANTITUSSIVE ACTIVITY

DR. R. S. SINGH, DR. R. K. GUPTA, DR. J. K. OJHA,  
DR. H. S. BAJPAI & DR. J. P. GUPTA

Cough was produced artificially by intravenous injections of 0.1 ml. of paraldehyde in patients not suffering from any cardiac and respiratory diseases. For this purpose patients of both sexes ranging from 20 years to 60 years of age from the wards of the S.S. Hospital were used in piece-meals. Injections were given at 12.00 noon. The time-interval between the injection of paraldehyde and onset of cough and the duration of cough were recorded by means of stop-watch and the intensity of cough and number of bouts of cough were noted. Next morning KANTKARI—AVALEHA was given two-hourly in three doses of 6 gm. each. At 12 O'clock intravenous injection of 0.1 ml. of paraldehyde was given again to these patients and again the time etc. were recorded. Similarly the action of modern cough-sedative drug Codein-phosph. Syrup has also been recorded on equal total number of patients by random samplings. In comparison to Codein Phosph., KANTKARI—AVALEHA has been found much more effective in reducing the intensity of cough and its number of bouts.

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## CLINICAL AND EXPERIMENTAL STUDIES OF ECLIPTA ALBA

P. S. CHAURE, G. N. CHATURVEDI & S. P. SEN

*Eclipta Alba*, Hasek (ver : *Bhringaraj*), is one of the widely used drug in Ayurveda for nervous diseases, especially in vertigo, epileptic fits, loss of memory etc. The drug has also been recommended in liver diseases by some of the modern investigators. Preliminary clinical trials undertaken in the S.S. Hospital on hypertensive subject showed that the drug induced a moderate fall in blood pressure. Further studies on established cases of essential hypertension confirmed its hypotensive effect.

Preliminary experimental studies were then conducted in the experimental medicine section to evaluate the mode of action. The aqueous decoction of the whole plant was used in the preliminary studies, and it was observed that the preparation could affect a fall in blood pressure alongwith a mild sedative effect. Further studies on the effect of different solvent extractives of the plant in dog's arterial blood pressure were made. The results indicated that while chloroform extractive caused a transient fall, the alcoholic extractive had a prolonged hypotensive effect. The hypotensive effect seemed to be of cholinergic nature, suggesting the presence of a cholinergic principle and this was confirmed by studies on isolated rats' ileum preparation. The prolonged hypotensive effect observed with alcoholic extractive could however not be accounted for cholinergic effect alone and further studies are in progress to analyse the mode of action. Systematic chemical studies of the extractives, evincing these pharmacodynamic effects, are also in progress.

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## ROLE OF SHELLAC (LAKSHA) IN THE HEALING OF FRACTURES

DR. P. J. DESHPANDE & DR. J. D. GODE

Extensive and pioneer work carried in the field of fracture healing by Udupa and his team of workers encouraged a number of enthusiastic workers to undertake an extensive search in the Ayurvedic literature for finding a drug effective in fracture healing. Prishniparni (*Uraria Picta*) is one of such drugs referred in the literature which, has also been studied and already reported. In 'Sushruta' in the 'Bhagna Chikitsa' (management of fracture)—per oral use of shellac has been advocated. Hence it was thought to undertake studies on this indigenous and freely available drug since the authentic literature advocates the use of this drug by oral route for these preliminary studies only oral feeding method is adopted.

### METHODS AND MATERIAL

Sufficient number of young adult albino rats weighing in a definite range were selected for study. Right humerus of each rat was fractured and the fractured animals were divided in two groups viz. control and treated. The animals in the treated group were given powdered laksha saturated in milk as well as mixed with cake in the dosage of 15 gm. per kg. of body weight. At the end of each week requisite number of animals were sacrificed by over dosage of ether anaesthesia and both fractured and intact bones were taken out and subjected to various studies.

Histological and histochemical studies were first undertaken. These studies indicated that in laksha treated group there is an overall stimulation of different cellular components influencing the cellular organisation and repair phenomenon. These histo-



logical and histochemical observations were corroborated by biochemical studies, which showed a sharp rise in the mucopolysaccharide contents in the first week and its subsequent quick utilization in the following weeks leading to an early rise in collagen contents in comparison to control group. The healing is complete by fourth week. Encouraged by these observations the isotopic studies are undertaken. S35 uptake studies carried out under the influence of this drug have supported the findings of the earlier studies by showing more accumulation of sulphated mucopolysaccharides in the early period and its gradual fall due to collagenization and mineralization from the third week onwards. All these observations are being studied and verified by using different isotopes which will be reported later on.

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## “STATUS OF MILITARY MEDICINE IN ANCIENT INDIA”

DR. JYOTIR MITRA & DR. SATYA PAL GUPTA

The review of Ayurvedic and other Indian literature reveals that the science of military medicine was quite developed in Ancient India, alike other branches of medicine. Sushruta has dealt with various precautionary measures of military medicine in the chapters of ‘Yuktaseniya’ and ‘Dundubhiswaniya’. He refers to the appointment of a permanent physician for looking after the king and his army. Besides, an abundant material on military medicine is available in Atharvaveda, Kausika Sūtra, Vālmiki Rāmāyaṇa, Mahābhārata and Kautilya Arthasāstra.

India had usually faced the disaster of wars as it had been always divisible into smaller regional states. The arrows and sabres etc. were the chief battle arms of those days. The physicians (Military) who treated the soldiers, in addition to ‘Bhisak’ were also known as ‘Sālyahartā’ and ‘Salyoddharāṇa-kovida’. It was essential for them to be well furnished with all the equipment of emergency treatment. They were also experts of other branches of medicine and fully aware of the infectious diseases and the calamities of poisoning. Kautilya has warned that military surgeon should always be girded with the surgical appliances, medicines, medicated oils and bandages etc. for meeting any state of emergency. They had a good knowledge of analgesics, resuscitatives, Visalyakaranies (Drugs used for taking out foreign bodies), Sandhānakaranies (wound healing drugs) & Sāvarnyakaranies (drugs used for colouring the scars). Kautilya mentions many compound of drugs used by soldiers as appetite-depressors so that they can fight in the battle for a period of fortnight or a month even in the conditions of scarcity of food stuff. A tradition of keeping female-nurses in the army campus was also prevalent and their primary job was to manage properly the mess arrangements and to encourage the injured soldiers.



## A PRELIMINARY CLINICAL TRIAL OF NARDOSTACHYS JATAMANSI ON PSY- CHONEUROTIC AND PSYCHOTIC PATIENTS

DR. K. P. SHUKLA, DR. O. N. SRIVASTAVA & PROF.  
Y. N. UPADHYAYA

The use of Nardostachys Jatamansi (N.O. Valerianaciae) in mental diseases has been indicated in old ayurvedic texts and its tranquilizing properties also have been observed in experimental studies by modern workers. Therefore a preliminary clinical trial was done in the out patients and inpatients departments of Kaya-Chikitsa and Psychiatric clinic of S.S. Hospital, B.H.U.

The patients of anxiety neurosis, schizophrenia, hypochondriasis, hysteria and obsessive compulsive neurosis were selected for the study. In selection, the patients having insomnia as one of the symptoms, were given preference. A detailed history of patient was taken and physical and laboratory examinations were done before starting the drug therapy. The crude drug was given in the form of decoction, one oz. morning and evening daily. The results were observed and found quite encouraging.

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## A STUDY OF PSYCHIC PERSONALITY IN AYURVEDA

DR. S. P. GUPTA, DR. JYOTIR MITRA & SHRI E. G.  
PHADIA

The research on the proposed topic has been pursued in the department of Basic Principles to enlist different Psychological processes under the three broad classifications of personality types named Satvika, Rajas and Tamas Sattva on the basis of hypothesis given in Ayurvedic texts. The individual items of each type were worked out on the basis of 'Psychological Questionnaire technique' of investigating human personality. The Psychic personality inventory consisting of eighty two questions was finalized under the expert guidance of Head of the Deptt. of Psychology, B.H.U.

The preliminary survey work on the one hundred normal subjects has been completed on the inventory. The responses of those hundred individuals were analysed on the lines of 'Item Analysis'. First, to test the reliability of responses, a ten percent samples from those individuals were again subjected to retest and their concurrences were analysed by the method of 'Analysis of variance'. The 'Reliability co-efficient' was found to be 0.62. Thereafter, 'Difficulty Indices' and 'Validity Indices' were computed for all the 82 items. Out of these 35 items having more than 10 as 'Difficulty index' and 'Validity Index' were weeded out for the future work. In these thirty five items, corresponding distribution of items of all the three types and sub-types of Psychic personality was also observed.



## PHARMACOGNOSTICAL STUDIES ON CLERODENDRUM PHLOMIDIS LINN. F. (LAGHU AGNIMANTHA)—LEAF

DR. K. C. CHUNEKAR & DR. K. RAGHUNATHAN

*Clerodendrum phlomis* Linn. f. (Fam. Verbenaceae) is a large often rambling shrub and is distributed throughout India in the drier parts. It is widely used in the indigenous system of medicine as *Kshudra* (smaller) *Agnimantha*. *Agnimantha* is one of the components, of a group of ten roots known as *Dasha-mool* which is used for a number of ailments.

In view of the efficacy of this drug in diabetes mellitus a detailed pharmacognostical study of the leaf was done. This also enables one to distinguish *Laghu Agnimantha* (*C. phlomis*) from *Brihat Agnimantha* (*Premna integrifolia*) on which work was already done elsewhere. The structure of the petiole, midrib, lamina, and quantitative values such as palisade ratio, stomatal index, stomatal number, vein-islet number, veinlet-termination number of the leaf have been worked out to elucidate the important diagnostic characteristics of the drug. The leaf is dorsi-ventral with one to two or three layers of palisade cells. There are glandular and non-glandular hairs. The stomata are cruciferous. Palisade ratio is 2.4, stomatal index 8.26 (upper), 10.99 (lower), vein-islet number 11 and veinlet termination number 17.

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## FURTHER STUDIES ON ANTI-ARTHRITIC PROPERTY OF DALBERGIA LANCEOLARIA (GAURAKH)

✓ DR. S. N. TRIPATHI, DR. PREM KISHORE &  
DR. D. N. PRASAD

Investigations on this plant for its anti-inflammatory and anti-arthritic properties are being carried out for last three years. And from time to time clinical as well as experimental preliminary observations have been presented and published. The results have been encouraging. Hence, it was felt necessary to pursue the problem so that anti-inflammatory property of this drug may be proved in different experimental models and active principle of this drug may be pin pointed.

In the present study, three experimental models—carrageenin induced hind paw oedema, granuloma pouch and formaldehyde induced arthritis, representing acute, subacute and chronic forms of inflammation have been selected. In addition to crude drug, different fractions have been also studied. Though the study is not complete, even then the observation available reveals that this drug has got definite anti-inflammatory property. Further studies for isolation of active principle and to establish the mode of action are in process in collaboration with Medicinal Chemistry Laboratories.

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## “EXPERIMENTAL VALIDATION OF COVARIABILITY AMONG CERTAIN PSYCHOLOGICAL VARIABLES AS OBSERVED IN AYURVEDIC THEORY OF PERSONALITY”

✓ PROF. D. S. GAUR & SHRI M. D. SHARMA

There are manifold differences among human individuals as well as consistencies and commonalities in relation to their constitution and reactive patternings. Indian Medicinal theory of personality types explains the said variation under three major psychophysical principles of Vata, Pitta, and Kapha due to their relative predominance.

It observed that this dominating influence of any one of the three can be reliably be judged by the consistency, stability and repeated occurrences of typical response tendencies which qualify the relative position of the particular system in the person concerned. Operationally speaking such observations refers to the covariation among a number of response tendencies or traits.

An experimental validation of covariability between two established discriminative behavioral indices or traits was attempted. Measurement was taken individually under a uniform procedure and laboratory conditions in 60 adult normal cases of relatively same age and educational standard.

The correlation was found to be .12 which is significant beyond .001 level of confidence and accounts for 44% of covariability. This finding collaborate with Ayurvedic assumptions. Moreover the clustering of cases into three groups as anticipated in Ayurveda is also evidenced by Chi-square technique. The three by three conjoint analysis on two variables revealed that there are three clear cut groups which account 85% of the cases.

Accumulation of further evidence on similar lines is highly desirable.

## PHARMACOGNOSTICAL STUDIES ON THE ROOT BARK OF GMLINA ARBOREA

S. PRASAD & AJAI PRAKASH

The present communication deals with the macro- and microscopical studies on the root bark of *Gmelina arborea* (Family-Verbenaceae). The drug is an ingredient of Dashmula—the important Ayurvedic preparation. The bark is curved and channelled, the external surface showing cracks, ridges, fissures and lenticels and exfoliating cork.

The primary root has a tetrarch to pentarch stele. The phellogen arises in the cortex. The cross section of the mature root bark shows 10-15 layers of lignified cork cells followed by a wide phelloderm and secondary phloem. Stone cells of varying shape and sizes are scattered in the phelloderm and phloem region. The parenchymatous cells of phelloderm and phloem contain oil globules, acicular crystals of calcium oxalate and granular resin.

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